

Claims

- [c1] A thermosettable powder coating composition comprising solid particulates comprising, in admixture, an oxazolidine blocked aminoplast and an active hydrogen functional material.
- [c2] A thermosettable powder coating composition according to claim 1, wherein the aminoplast is selected from the group consisting of the reaction products of aldehydes with melamine, urea, benzoguanamine, acetoguanamine, and glycouril compounds.
- [c3] A thermosettable powder coating composition according to claim 1, wherein the oxazolidine-blocked aminoplast resin is the reaction product of a polyisocyanate-functional compound with oxazolidine or an alkyl-substituted oxazolidine.
- [c4] A thermosettable powder coating composition according to claim 3, wherein the polyisocyanate-functional compound is a member selected from the group consisting of diisocyanates, biurets, isocyanurates, and allophanates of diisocyanates, triisocyanates, and polymeric polyisocyanates.
- [c5] A thermosettable powder coating composition according to claim 1, wherein the active hydrogen functional material comprises as functional groups a member selected from the group consisting of hydroxyl, carbamate, urea, amide, amine, carboxylic acid, and thiol groups and mixtures thereof.
- [c6] A thermosettable powder coating composition according to claim 1, wherein the active hydrogen functional material comprises a monomeric active hydrogen-functional compound.
- [c7] A thermosettable powder coating composition according to claim 6, wherein the monomeric active hydrogen functional material comprises a reaction product of a polyisocyanate with an amino carbamate or hydroxy carbamate compound.
- [c8] A thermosettable powder coating composition according to claim 1, wherein the active hydrogen functional material comprises a polymer selected from the group consisting of polyesters, polyurethanes, vinyl copolymers, addition

copolymers, and combinations thereof.

- [c9] A thermosettable powder coating composition according to claim 8, wherein the polymer comprises hydroxyl groups, carbamate groups, urea groups, carboxylic acid groups, or a combination thereof.
- [c10] A thermosettable powder coating composition according to claim 1, wherein the equivalent ratio of the oxazolidine blocked aminoplast resin to the active hydrogen-functional material is from about 0.20 to about 5.0 equivalents of oxazolidine blocked aminoplast resin to each equivalent of active hydrogen-functional material.
- [c11] A thermosettable powder coating composition according to claim 1, wherein the equivalent ratio of the oxazolidine blocked aminoplast resin to the active hydrogen-functional material is from about 0.5 to about 2.0 equivalents of oxazolidine blocked aminoplast resin to each equivalent of active hydrogen-functional material.
- [c12] A thermosettable powder coating composition according to claim 1, comprising a further material reactive with active hydrogen functionality.
- [c13] A thermosettable powder coating composition according to claim 1, comprising a further thermosettable materials reactive with one another.
- [c14] A method of coating a substrate, comprising steps of applying a thermosettable powder coating composition according to claim 1 to a substrate and curing the applied composition to provide a coating on the substrate.
- [c15] A coated substrate prepared according to the method of claim 14.